WHAT IS CLAIMED IS:

1.   An apparatus comprising:

a first reservoir having a first buffer and a first electrode terminal;

a chamber coupled to the first reservoir and having a bottom plate and a top plate in parallel alignment and adapted to hold a separatory medium between the bottom plate and the top plate;

a second reservoir coupled to the chamber and having a second buffer and a second electrode terminal; and

a sample delivery device having a longitudinal axis and having a plurality of tabs extending orthogonally from the longitudinal axis, the sample delivery device adapted to couple with an opening of the second reservoir.

2.   The apparatus of claim 1 wherein the top plate includes glass or plastic.

3.   The apparatus of claim 1 wherein the bottom plate includes glass or plastic.

4.   The apparatus of claim 1 wherein the top plate is separated from the bottom plate by less than 500 microns.

5.   The apparatus of claim 1 wherein the top plate is separated from the bottom plate by approximately 190 microns.

6.   The apparatus of claim 1 wherein the top plate has a first thickness and the bottom plate has a second thickness and wherein the first thickness is substantially greater than the second thickness.

7.   The apparatus of claim 1 wherein the first electrode terminal is coupled to a first cover and wherein the second electrode terminal is coupled to a second cover.

Attorney Docket No. 01360.034US1

8.   The apparatus of claim 1 wherein the sample delivery device includes a membrane.

9.   The apparatus of claim 1 wherein the sample delivery device includes a porous structure.

10.   The apparatus of claim 1 wherein the sample delivery device includes a nanoporous membrane.

11.   The apparatus of claim 1 wherein the plurality of tabs includes at least 5 tabs.

12.   The apparatus of claim 1 wherein the plurality of tabs includes between 50 and 200 tabs.

13.   The apparatus of claim 1 further comprising a band detector.

14.   The apparatus of claim 1 wherein the band detector includes an optical densitometer.

15.   The apparatus of claim 1 wherein the first electrode terminal is coupled to an anode or cathode of a power supply.

16.   The apparatus of claim 1 wherein the second electrode terminal is coupled to an anode or cathode of a power supply.

17.   A method of data analysis comprising:

receiving data points arranged in a coordinate system having an x-axis corresponding to one or more discrete samples, a y-axis corresponding to time and a z-axis corresponding to signal intensity of each data point;

detecting each of a plurality of lanes distributed along the x-axis, each lane associated with a particular sample of the one or more discrete samples; and

detecting one or more bands within each of the plurality of lanes.

18. The method of claim 17 further comprising summing the data points along the y-axis.

19. The method of claim 17 further comprising normalizing the data points along the x-axis.

20. The method of claim 17 wherein detecting each of the plurality of lanes includes detecting one or more peak values.

21. The method of claim 17 wherein detecting each of a plurality of lanes includes determining a first lateral boundary and a second lateral boundary for each lane.

22. The method of claim 17 wherein detecting one or more bands includes detecting one or more peak values.

23. The method of claim 17 wherein detecting one or more bands includes summing the data points along the x-axis within each of the plurality of lanes.

24. A method of analysis comprising:

along a first axis of a grid, summing a first plurality of data points;

along a second axis orthogonal to the first axis, detecting a first plurality of peaks among the sums of the first plurality of data points;

22

establishing a first boundary and a second boundary for each peak of the first plurality of peaks;

along the second axis, summing a second plurality of data points for each band located between a particular first boundary and a particular second boundary;

along the first axis, detecting a second plurality of peaks among the sums of the second plurality of data points between the particular first boundary and the particular second boundary; and

storing each peak of the second plurality of peaks.

25.   The method of claim 24 further comprising along the second axis, normalizing the sums of the first plurality of data points,

26.   The method of claim 24 further comprising receiving a plurality of data points distributed along the first axis and the second axis.

27.   The method of claim 24 wherein establishing the first boundary and the second boundary includes receiving dimensional data for an electrophoresis comb.

28.   A method comprising:
heating a separation medium to approximately a melting temperature;

placing the heated separation medium in a first reservoir of an electrophoresis device;

flowing the heated separation medium from the first reservoir into a chamber of the electrophoresis device;

inserting a spacer into the chamber from within a second reservoir of the electrophoresis device to create a void in the separation medium; and

cooling the separation medium.

29.   The method of claim 28 wherein heating the separation medium includes heating to approximately 60° centigrade.

Attorney Docket No. 01360.034US1

30.   The method of claim 28 wherein flowing the heated separation medium from the first reservoir into the chamber includes migrating the heated separation medium into a space between an upper plate and a lower plate, the upper plate and lower plate connected to the first reservoir and the second reservoir.

31.   The method of claim 28 wherein flowing the heated separation medium from the first reservoir into a chamber of the electrophoresis device includes pouring the heated separation medium into the first reservoir and pumping the heated separation medium into the chamber.

32.   The method of claim 28 further including removing the spacer.

33.   The method of claim 28 wherein flowing includes pumping the heated separation medium.

34.   The method of claim 28 wherein flowing includes sealing the first reservoir and applying an elevated atmospheric pressure to the first reservoir.

35.   The method of claim 28 further including verifying transfer of the separation medium through the chamber of the electrophoresis device into the second reservoir.

36.   The method of claim 28 further comprising:
        applying water to the void; and
        inserting a membrane in the void.

37.   A method comprising:
        inserting a plurality of teeth of a toothed membrane into a void in a separatory media;
        introducing running buffer into a first reservoir and a second reservoir; and

24

providing an electrical potential between the first reservoir and the second reservoir.

38.   The method of claim 37 further comprising introducing water to the void before inserting the plurality of teeth.

39.   The method of claim 37 further comprising circulating a cooling fluid near the separatory media.

40.   The method of claim 37 further comprising applying one or more samples to one or more teeth of the plurality of teeth of the toothed membrane.

41.   The method of claim 37 further including preparing a comb using a robotic spotter.

42.   A computer readable storage media having instructions stored thereon for implementing a method comprising:
    receiving data points arranged in a coordinate system having an x-axis corresponding to one or more discrete samples, a y-axis corresponding to time and a z-axis corresponding to signal intensity for each data point;
    detecting each of a plurality of lanes distributed along the x-axis, each lane associated with a particular sample of the one or more discrete samples; and
    detecting one or more bands within each of the plurality of lanes.

43.   The computer readable storage media of claim 42 wherein the method further comprises summing the data points along the y-axis.

44.   The computer readable storage media of claim 42 wherein the method further comprises normalizing the data points along the x-axis.

25

45. The computer readable storage media of claim 42 wherein detecting each of the plurality of lanes includes detecting one or more peak values.

46. The computer readable storage media of claim 42 wherein detecting each of a plurality of lanes includes determining a first lateral boundary and a second lateral boundary for each lane.

47. The computer readable storage media of claim 42 wherein detecting one or more bands includes detecting one or more peak values.

48. The computer readable storage media of claim 42 wherein detecting one or more bands includes summing the data points along the x-axis within each of the plurality of lanes.

49. A system comprising:
   a first reservoir having a first buffer and a first electrode terminal;
   a chamber coupled to the first reservoir and having a bottom plate and a top plate in parallel alignment;
   a separation medium disposed between the bottom plate and the top plate;
   a second reservoir coupled to the chamber and having a second buffer and a second electrode terminal and having an opening adapted to receive a membrane; and
   a sample delivery device having a longitudinal axis and having a plurality of tabs extending orthogonally from the longitudinal axis.

50. The system of claim 49 wherein the sample delivery device includes a membrane.

51. The system of claim 49 wherein the sample delivery device includes a porous membrane.

26

52.   The system of claim 49 wherein the sample delivery device includes a nanoporous membrane.

53.   The system of claim 49 wherein the separation medium includes a gel.

54.   The system of claim 49 wherein the separation medium includes agarose.

55.   The system of claim 49 wherein the separation medium includes agarose having a purity between 0.01 and 30 percent.

56.   The system of claim 49 wherein the separation medium includes agarose having a purity between 0.05 and 5.0 percent.

57.   The system of claim 49 wherein the separation medium includes linear polyacrylamide (LPA).

58.   The system of claim 49 wherein the separation medium includes (LPA) having a purity between 0.05 and 10 percent.

59.   The system of claim 49 wherein the separation medium includes a composite of agarose and linear polyacrylamide (LPA).

60.   The system of claim 49 wherein the separation medium is adapted to separate molecules in a molecular weight range of between 1,000 to 1,000,000,000.

61.   The system of claim 49 wherein the separation medium is adapted to separate molecules in a molecular weight range of between 10,000 to 10,000,000.